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Oro et al.(10) **Pub. No.: US 2021/0099029 A1**(43) **Pub. Date: Apr. 1, 2021**(54) **MAGNETIC ALIGNMENT SYSTEMS WITH
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ELECTRONIC DEVICES****Publication Classification**

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Francisco, CA (US)(73) Assignee: **Apple Inc.**, Cupertino, CA (US)(21) Appl. No.: **17/028,295**(22) Filed: **Sep. 22, 2020****Related U.S. Application Data**(60) Provisional application No. 62/907,332, filed on Sep.
27, 2019, provisional application No. 63/061,752,
filed on Aug. 5, 2020.(57) **ABSTRACT**

A magnetic alignment system can include a primary annular magnetic alignment component and a secondary annular magnetic alignment component. The primary alignment component can include an inner annular region having a first magnetic orientation, an outer annular region having a second magnetic orientation opposite to the first magnetic orientation, and a non-magnetized central annular region disposed between the primary inner annular region and the primary outer annular region. The secondary alignment component can have a magnetic orientation with a radial component. Additional features, such as a rotational magnetic alignment component and/or an NFC coil and circuitry can be included.

